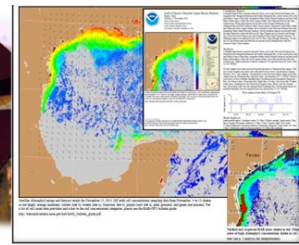


Photo credit: NOAA, TPWD, FWRI, WHOI



Issue 3 February 2013



NOAA HAB-OFS Newsletter

Welcome to our NOAA HAB-OFS Quarterly Newsletter. We are always happy to hear from you so please send your topic suggestions, questions, comments and feedback to hab@noaa.gov.

In this issue:

- *New HAB-themed National Weather Service Product*
- *NOAA Developing an Ecological Forecasting Roadmap*

New HAB-themed National Weather Service Test Product Coming Soon!

NOAA's HAB Operational Forecast System (HAB-OFS) Team is excited to announce the launch of a new HAB-themed National Weather Service (NWS) Beach Hazard Statement (BHS) test product on February 4th. As many of you know, since 2004, NOAA has issued forecasts through the HAB-OFS that include predictions of the short term risk of experiencing respiratory impacts associated with *Karenia brevis* blooms in the Gulf of Mexico. Although these forecasts are available publicly on the HAB-OFS website (tidesandcurrents.noaa.gov/hab) and the new NOAA HAB-OFS Facebook page (www.facebook.com/Habredtidewatchnoaagov), reaching vulnerable populations in high tourist areas has always been a challenge. In an effort to supplement existing communications and reach a broader audience, the HAB-OFS Team began a collaboration with NOAA's National Weather Service (NWS).



Figure 1. Warning sign on a beach in Florida. Photo credit: NOAA

Since June 1, 2012, the Tampa Bay Area NWS Weather Forecast Office (WFO) has been testing a new Beach Hazard Statement. "We're consolidating beach hazard information to make it more accessible to the public," said Brian LaMarre, Meteorologist-in-Charge of WFO Tampa Bay Area. "Whether you're going to surf, fish, or are just taking the family to the beach for a relaxing day, these new statements will provide a primary source of information about the conditions you may face so you can plan your trip to the beach accordingly."

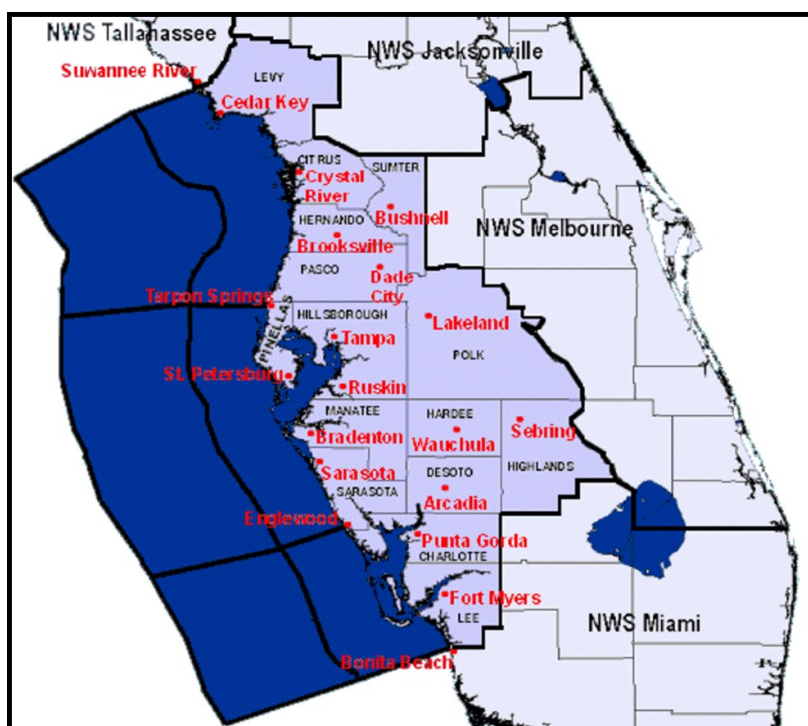


Figure 2. The area of responsibility for NOAA's National Weather Service Weather Forecast Office Tampa Bay Area spans from Levy to Lee counties.

The HAB-OFS' respiratory impact forecasts seemed to fit the scope of the Beach Hazard Statements. At the HAB-OFS Florida Bulletin Meeting held in St. Petersburg, FL, last August, discussions between the HAB-OFS Team, Florida partners and representatives from NOAA's NWS confirmed that the HAB BHS could indeed be a beneficial addition to existing public awareness efforts in Florida. Over the past several months, NOAA has been preparing to test the HAB BHS by working to address any possible concerns, establish standard protocols and meet technical requirements. In order to ensure the accuracy of the information being communicated via the BHS, NOAA developed procedures and templates in collaboration with Florida partners, especially the Florida Fish and Wildlife Conservation Commission's Fish and Wildlife Research Institute, Mote Marine Laboratory and the Florida Department of Health.

On February 4th, the HAB-OFS Team's respiratory impact forecasts joined the list

(continued from page 1) of coastal hazards covered by the NWS WFO Tampa Bay area BHS, which already included rip currents and minor tidal overflow. The HAB BHS will be disseminated when HAB-OFS analysts forecast moderate and/or high respiratory impacts for a confirmed bloom present alongshore from Levy to Lee counties (NWS WFO Tampa Bay Area of responsibility). The HAB BHS will provide information on the predicted level of respiratory impacts, counties affected, duration of the impacts and general precautionary information. The HAB BHS will be available, along with the other coastal hazard messages, through a variety of means including the Tampa Bay Area NWS web page (weather.gov/tampa), the NWS home page (weather.gov), NOAA Weather Radio and NOAA Weather Wire Service.

Although the Beach Hazards Statement product is also being tested at five additional WFOs across the country for various coastal hazards, the WFO Tampa Bay Area is the only NWS office currently testing the use of the BHS for providing harmful algal bloom information. Partners and members of the public are encouraged to provide feedback regarding the BHS at: weather.gov/survey/nws-survey.php?code=CHMBHS. The WFO Tampa Bay Area will evaluate feedback throughout the test. To view the official NOAA press release, click [here](#).

NOAA's Ecological Forecasting Roadmap

Allison Allen, Interim NOAA Ecological Forecasting Portfolio Manager

Excerpt from NOAA's Ecological Forecasting Roadmap White Paper

For more than a decade, a number of NOAA offices have been researching ecological processes and developing experimental forecasts for a variety of ecosystem components, including harmful algal blooms, pathogens, jellyfish, brown shrimp, hypoxia, distributions of habitat and key species, sea level change, wave energy and ocean acidification (oceanservice.noaa.gov/observations/ecoforecast). The most mature of these are harmful algal bloom (HAB) forecasts, which are fully operational in the Gulf of Mexico with the HAB Operational Forecast System (HAB-OFS), and plans to transition to operations experimental forecasts in the Great Lakes, Gulf of Maine and along the Pacific Coast.

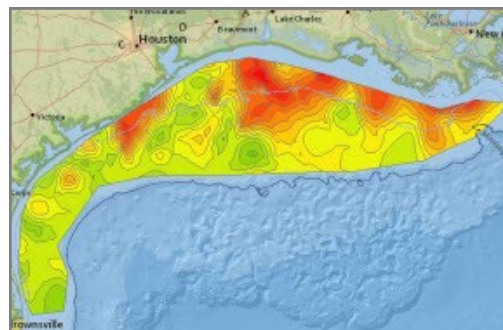


Figure 3. Map of the western Gulf of Mexico showing levels of dissolved O₂ interpolated from measurements. This data is used in hypoxia forecasts.

Source: www.ncddc.noaa.gov/hypoxia

Historically, however, NOAA has lacked a formal Ecological Forecasting Program, which raises challenges in identifying corporate priorities, securing long-term resource commitments and maximizing the efficiency of existing forecasting abilities. In 2012, NOAA developed the concept of an Ecological Forecasting Roadmap, a prioritized, agency-wide approach for coordinating NOAA's existing capabilities and operational environmental prediction and service delivery infrastructures. Such a broadly-supported NOAA strategy for ecological forecasting will offer management solutions to assure protection, maintenance and restoration of the health and productivity of ocean, coastal and Great Lakes ecosystems, for both natural resources and human communities. This agency-wide effort will also help connect internal-NOAA activities to related efforts in the external academic community and private sector.

Within the Roadmap, there are three initial NOAA priorities, HABs, hypoxia and pathogens. These were chosen based on the following: their economic, environmental and health effects, importance to constituents and to the environment, and apparent increasing prevalence, distribution and intensity in numerous areas of the country. The Roadmap will address key issues relevant to HAB forecasts, including: sustained resources, improved models to improve forecast accuracy and resolution, additional data collection from both remote and *in situ* sensors, upgraded computing capacity to process these data and enhanced forecast dissemination using NOAA-wide communications assets.

The outcome of the Roadmap will be a suite of more accurate and reliable forecasts in all regions of the country concerned with harmful algal blooms, hypoxia and pathogens. As the Roadmap effort progresses, customers should see more dependable, higher quality products on a broader scale than currently available under the present *ad hoc* development and delivery model.

Many Thanks to our Partners and Data Providers

<http://tidesandcurrents.noaa.gov/hab/contributors.html>

This newsletter was written and designed by:

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National Center for Coastal Ocean Science (NCCOS)

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